



# DON Data Management & Interoperability

Navy RIC Meeting  
12 April 2001

---

Office of the DON CIO



# Briefing Outline

- Briefing Objectives
- DON CIO's Role in Architecture & Standards
- Board of Representatives Integrated Product Teams
- Emphasis on Interoperability
- The Data Management & Interoperability Challenge
- Enterprise Strategy
- DON DMI IPT Products
- Related Efforts
- Summary



# Objectives

- Provide an overview of DON CIO's role in Architecture & Standards.
- Discuss the DON CIO-sponsored Data Management & Interoperability efforts.
- Solicit recommendations/comments from the Navy Logistics Community.



# DON CIO Role in Architecture & Standards

- Clinger-Cohen Act of 1996 (Public Law 104-106)
  - Establish and maintain a capital planning and investment control process that links mission needs, information, and information technology.
  - Develop, maintain, and facilitate the implementation of a sound and integrated information technology architecture.
- Information Technology Architecture defined in OMB Circular A-130:
  - Business Processes
  - Information Flows
  - Data Descriptions
  - Applications
  - Technology Infrastructure
  - Standards and Technical Reference Model

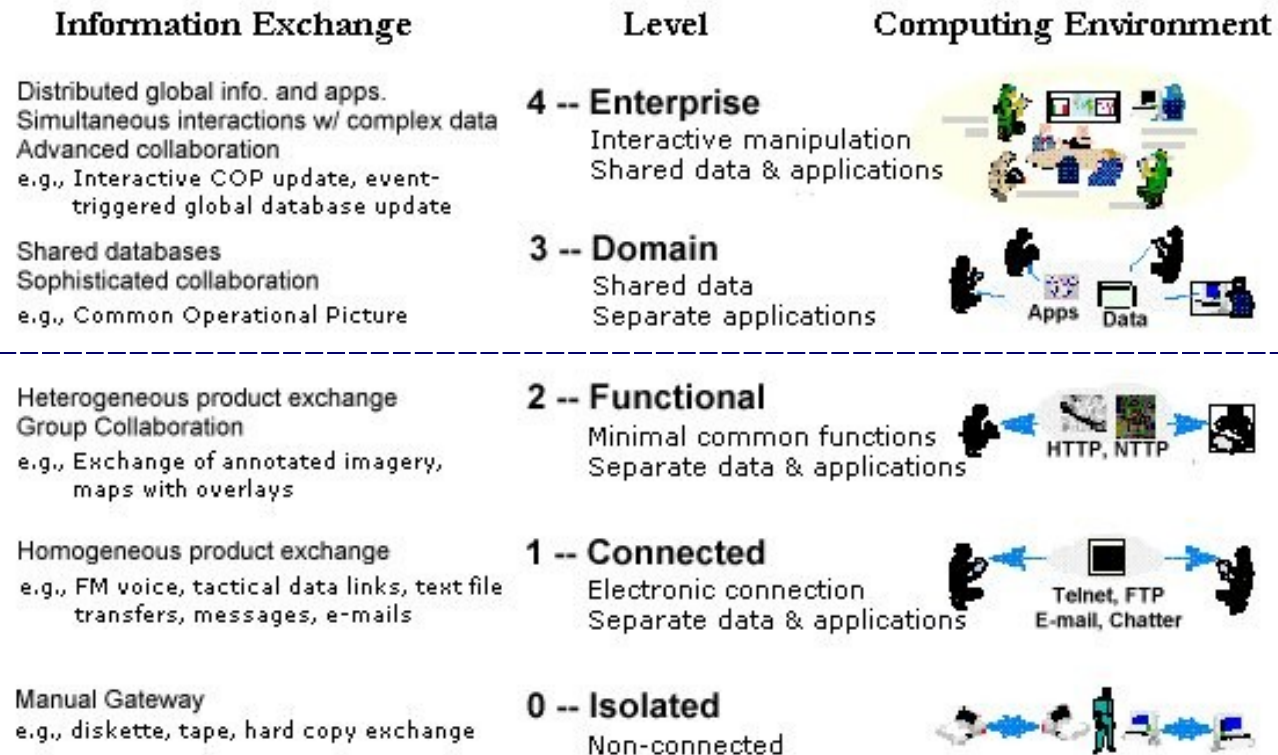


# Board of Representatives IPTs

- Information Technology Standards Guidance
  - May 1998
  
- Information Technology Infrastructure Architecture
  - May 1999
  
- Data Management & Interoperability
  - November 2000



# Increased Emphasis on Interoperability





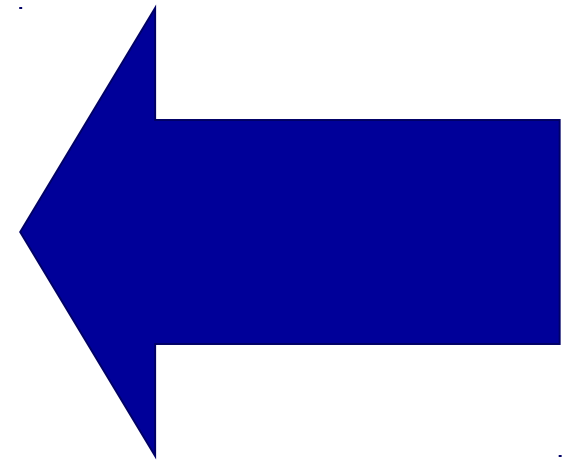
# The DMI Challenge

- Data is redundant, not shared, and often conflicting.
- Current acquisition process does not adequately address data.
  - Stove-piped development characterized by non-standard data and unique interfaces/translators.
  - Inadequate and inconsistent documentation to support interoperability and IT assessments.
- Lack of enterprise management and engineering processes to solve cross-system, cross-Service data problems.



# Enterprise Strategy

- Strategic Planning Meeting, 24-25 August 1999.
  - 60 attendees/28 organizations
- Board of Representatives IPT, November 1999.
  - 40 participants/27 Commands
- IPT Products:
  - Strategic Plan
  - SECNAVINST
  - Implementation Planning Guide
  - Metadata Repository Requirements
- Metadata Repository Pilot







# Strategic Plan Goals

1. *Provide a data management infrastructure that will ensure maritime Information Superiority.*
  - Data management policy
  - Acquisition policy
  - Education and training
  - Outreach strategy
2. *Reduce the life cycle cost of data through integration, standards, and the use of authoritative data sources.*
  - Focus efforts
  - Develop and implement standards
  - Identify authoritative data sources



# Strategic Plan Goals

3. *Provide a DMI repository and tools to support IT assessments and engineering.*
  - Define repository requirements
  - Conduct pilot
  - Provide metadata capture and analysis tools
4. *Provide a data architecture which addresses both information requirements and data capabilities.*
  - Establish baseline of data assets
  - Define information requirements via Operational Architecture
  - Develop data architecture



# Strategic Plan Goals

*5. Provide processes and metrics to enable and evaluate data management and data engineering.*

- Standard processes and procedures
- Metrics for cost and operational assessments
- Assess emerging technologies
- Process improvement



# SECNAV Instruction

- Policy implements the Strategic Plan.
- Requires funding of data management in the PPBS process.
- Requires appointment of Navy and Marine Corps Data Managers:
  - Service
  - Functional



# Functional Data Managers

- Responsibilities:
  - Implement processes associated with the production and use of data.
  - Assist Program Managers in the documentation of data exchange formats and systems/application metadata.
  - Develop and maintain functional area views of the DON data architecture.
  - Coordinate with the DoD and other Service/Agency data managers.
  - Monitor data standards implementation.
  - Designate authoritative data sources.



# Implementation Planning Guide

- Guidelines for implementation of SECNAVINST.
  - Approved by Board of Representatives in November
  - Promulgation following SECNAVINST signature
- Addresses:
  - DMI Requirements
  - Related efforts
  - DMI Concept of Operations
  - Plan of Action and Milestones



# Metadata Repository Requirements

- Systems-focused.
- Capability to identify families-of-systems.
- Comply with Section 8121/8102 requirements.
- Support data interoperability assessments.
- Comply with DoD 8320.1-M-1 metadata requirements.
- Do not duplicate Defense Data Dictionary System capabilities.
- Core Architecture Data Model (CADM)-based database structure.



# Repository Pilot

- Operational DMI Repository (DMIR).
  - Oracle 8i database
  - Cold Fusion GUI
  - Hosted at contractor facility
- Test data:
  - Collected by MARCORSYSCOM and Fleet Information Warfare Center
  - DON Y2K Database used as systems baseline
  - Testing to be completed July - September
- Considering options for permanent hosting.
  - October 2001





# DMIR Main Screen

**DON CIO DMIR Main Screen - Microsoft Internet Explorer**

File Edit View Favorites Tools Help | Address

## Data Management & Interoperability Repository (DMIR) Main Screen

**NEWS**  
[New 5000.X Policy](#)  
[Registration Status](#)  
[DMIR Documentation](#)

**DMI PROCESSING**  
[Requirements](#)  
[Registration](#)  
[Assessments](#)  
[Architecture](#)  
[Management](#)  
[Reports](#)

**DMIR LOCATIONS**  
[Development](#)  
[DON CIO](#)  
[FDADS](#)

Acquisition and Technology

[Show POC Data](#)

**DMIR HELP**  
[Download DOC](#)  
[DMIR Site Map](#)

[CHANGE PASSWORD](#)  
[LOGOFF](#)

**Information Requirements**

**DMI Management**

**Systems Registration**

**DMIR Management**

**Data Architecture & Standards**

**Assessment Support**

**Welcome to the DMIR(Development) Web Site:**

**MISSION:**  
Provide the data management and interoperability infrastructure, and associated processes, to enable systems interoperability, knowledge management and information assurance.

**VISION:**  
Global, affordable and timely access to shared, reliable, and secure data that enables maritime information superiority by 2005.

Local intranet



18



# DMIR System Registration - Select System

Find system by Name, Org POC, DB, Doc, Program, or Functional Area

System Registration Module - Microsoft Internet Explorer

http://dmirprod/dmirprod/Register/menuRegister.cfm

## Systems Registration Module

[PREVIOUS SYSTEMS](#)  
[SELECT A SYSTEM](#)  
by Name  
by Organization  
by POC  
by Database  
by Document  
by Program  
by Functional Area  
[FIND A DATABASE](#)  
[REGISTER SITE](#)  
[LINK ORG TO SITE](#)  
[APPLICATION](#)  
[ADVANCED SEARCH](#)  
[REGISTER NEW](#)  
[LOGOFF](#)

To Begin:

Select a system to register to continue registration extracted from the Y trying to add a new system.

Each time you select a system, the system will be available for registration for duration of your profile, making it easier to find.

Update System Data

Once you have selected the system using either the relevant system data or the system, you will then be able to register the system.

**NOTE: In ALL cases, the system will be available for registration for duration of your profile, making it easier to find.**

Select "Search FOR" Value - Microsoft Internet Explorer

[CLOSE](#) [BACK](#) [UPDATE LIST](#) [USE SELECTED](#) [NEXT](#)

### Search for System by Name

Search String:   **Search returned more than 100 records.**

☒ Begins With ☐ Contains ☐ Search Acronym/Abbreviation Instead

**First 100 of 4557 Systems:**

- (FOTS) FORWARD OBSERVER TRAINING SYSTEM
- (GRDS) GENERIC RADAR DISPLAY SYSTEM
- (SPCG) SHIP'S PARAMETER CONVERSION GROUP
- 25" SLATED GLOBE
- 2M DATABASE (ORACLE VER. 7.3.3)
- 5"/62 EX 45 MOD 4 GUN
- 51V-1/2/3/4 GLIDE PATH RECEIVER
- 51Z-2/3 COLLINS BEACON, MARKER SET
- 51Z-4 COLLINS BEACON, MARKER SET
- 6128M-2D RADIO SET, VHF

Select the System to be Displayed.

Type in Name or Acronym to search for system(s)



# DMIR System Registration - System Description

System Registration Module - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites History Address http://dmirprod/dmirprod/Register/menuRegister.cfm Go

**Systems:**  
TRANSPORTATION COORDINATO  
SHOW SAVE REMOVE

SELECT A SYSTEM  
[by Name](#)  
[by Organization](#)  
[by POC](#)  
[by Database](#)  
[by Document](#)  
[by Program](#)  
[by Functional Area](#)  
[FIND A DATABASE](#)  
[ADVANCED SEARCH](#)  
[REGISTER NEW](#)  
[EDIT ASSOCIATIONS](#)  
[DATA UPLOAD](#)  
[LOGOFF](#)

## System Description

<b>System Name:</b>	TRANSPORTATION COORDINATORS' AUTOMATED INFORMATION FOR MOVEMENTS SYSTEM
<b>Acronym:</b>	TC-AIMS
<b>Hardware Variant:</b>	
<b>Description:</b>	TC-AIMS (MC) provides the MAGTF commander with the automated capability to plan, coordinate, manage, and execute MAGTF movements at origin, from origin to point of embarkation, etc.
<b>Forwarding Component:</b>	Navy
<b>System Purpose:</b>	
<b>Status:</b>	Active
<b>Version/Variant:</b>	
<b>8102 Compliant:</b>	No
<b>8102 Status text:</b>	
<b>Mission Critical:</b>	Mission Critical
<b>System ACAT Code:</b>	NA
<b>Role Code:</b>	System Element
<b>System Type:</b>	Telecommunications System
<b>Security Classification:</b>	UNCLASSIFIED
<b>Nominal Users:</b>	
<b>Quantity Acquired:</b>	
<b>Budget Initiative Nr:</b>	
<b>Acquisition Cost(\$K):</b>	
<b>Life Cycle Cost(\$K):</b>	0

Done Local intranet



# DMIR System Registration - System Description (cont.)

System Registration Module - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites History Print Address <http://dmirprod/dmirprod/Register/menuRegister.cfm> Go

**Associated Organizations**

<i>Organization (Code)</i>	<i>Role</i>	<i>POC</i>
GRCI (SMD)	Technical Support	<a href="#">LU, JAMES</a>
USMC	Software Support Activity	<a href="#">CHALKER, JOE</a>
USMC	Resource Sponsor	<a href="#">KELLEY, J</a>
USMC (PM-IS)	Owner	<a href="#">CAMPBELL, LTCOL BOYD</a>

**Functional Areas**

<i>Functional Area Name</i>
LOGISTICS

**Databases**

<i>Database Name</i>	<i>Subject Areas</i>	<i>Tables</i>	<i>Attributes</i>	<i>Documents</i>
<a href="#">TRANSPORTATION COORDINATORS' AUTOMATED INFORMATION FOR MOVEMENTS SYSTEM</a>	13	66	268	1

**Data Exchange Standards**

*No Data Exchange Standards Found*

**Associated Sub Systems**

*No Associated Subsystems Found*

**System Program Elements**

Done Local intranet





# DMIR System Registration - Edit Database Metadata Table Information

Database Metadata Details - Microsoft Internet Explorer

File Edit View Favorites Tools Help

[CLOSE](#) - [EDIT DATABASE](#) -

Table and Data Element Metadata: *TRANSPORTATION COORDINATORS' AUTOMATED INFORMATION FOR MOVEMENTS SYSTEM*

Search: Subject Area  [Table =  And  Element =

Search Results: Selected Subject Area

Selected Table Metadata

Name:	BLODTYPE
Long Name:	BLODTYPE
Revision:	0
Type:	METADATA
Definition:	REFERENCE TABLE LISTING VALID BLOOD TYPES
Created:	09/14/00
Modified:	
Comments:	None

Tables\_Elements

- [BLODTYPE \(1\)](#)
- [BLOOD TYPE\(p\)](#)
- [MOS \(2\)](#)
- [BILLET MOS\(p\)](#)
- [MOS DESCRIPTION](#)
- [RANK \(4\)](#)
- [IS OFFICER](#)
- [PAY GRADE\(p\)](#)
- [RANK ABBREVIATION\(p\)](#)
- [RANK DESCRIPTION](#)
- [SECURITY \(2\)](#)
- [TRANS RANK \(3\)](#)
- [WEAPON TYPE \(3\)](#)

List of Tables and Number of Data Elements



# DMIR System Registration - Edit Database Metadata Data Element Information

Database: **DMIR** | Table: **PERSON** | Element: **BLOOD\_TYPE**

Table and Data Element Metadata: **TRANSPORTATION COORDINATORS' AUTOMATED INFORMATION FOR MOVEMENTS SYSTEM**

Search: Subject Area **PERSON** [Table =  And  Element = ]

Submit Clear Search Help

Search Results: Selected Subject Area

Selected Element Metadata

Element Detail	Key Structure	DDDS
Name:	<b>BLOOD_TYPE</b>	
Access Name:	BLOOD_TYPE	
Data Type:	CHAR	
Max Characters:	3	
Scale:		
Unit of Measure:		
Use Code:	x	
Alias:		
Definition:	BLOOD TYPE OF THIS PAX (THE PERSONS BLOOD TYPE)	
Function:		
Revision:	0	
High Range:		
Low Range:		
Classification:		
Element Status:	DR	
Source:	UNK	
Application:	Data Analysis & Reconciliation Tool	
Derive Code:	1	
Logical Design:	L	
Element Change:	n	
Default Value:		
Originator:		

List of Data Elements and Relationship

- Tables\_Elements
  - BLOODTYPE (1)**
    - BLOOD\_TYPE (p)**
  - MOS (2)
    - BILLET MOS (p)
    - MOS DESCRIPTION
  - RANK (4)
    - IS OFFICER
    - PAY GRADE (p)
    - RANK ABBREVIATION (p)
    - RANK DESCRIPTION
  - SECURITY (2)
  - TRANS RANK (3)
  - WEAPON TYPE (3)



# DMIR System Registration - Edit Database Metadata Data Element

Database Metadata Details - Microsoft Internet Explorer

File Edit View Favorites Tools Help

[- CLOSE -](#) [EDIT DATABASE -](#)

Table and Data Element Metadata: *TRANSPORTATION COORDINATORS' AUTOMATED INFORMATION FOR MOVEMENTS SYSTEM*

Search: Subject Area  [Table =  And  Element =

Search Results: Selected Subject Area

Selected Element Metadata

Element Detail	Key Structure	DDDS	Data Domain
Domain Name:	BLOOD_TYPE		
Description:			
Construct Type:	0		
Format Code:			
GE Type Code:			
Max Characters:	3		
Domain Type Code:			
Domain Value Type:			
Domain Range Values:	<div><div>A+ -</div><div>A - -</div><div>AB+ -</div><div>AB - -</div><div>B+ -</div></div>		

Valid Domain Values for Data Element

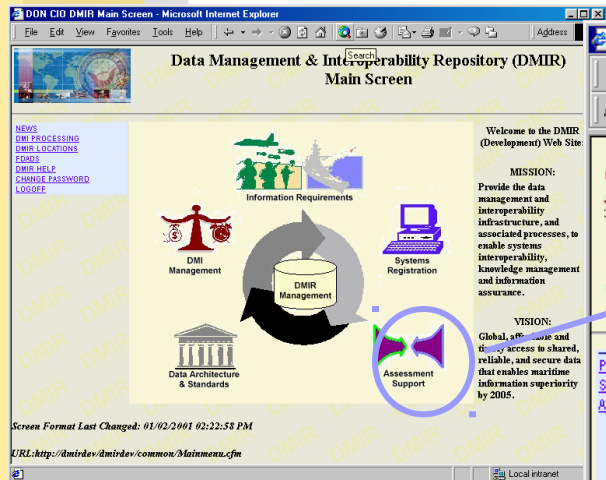
Tables\_Elements

- [BLOODTYPE \(1\)](#)
  - [BLOOD\\_TYPE\(p\)](#)
- [MOS \(2\)](#)
  - [BILLET MOS\(p\)](#)
  - [MOS\\_DESCRIPTION](#)
- [RANK \(4\)](#)
  - [IS\\_OFFICER](#)
  - [PAY\\_GRADE\(p\)](#)
  - [RANK\\_ABBREVIATION\(p\)](#)
  - [RANK\\_DESCRIPTION](#)
- [SECURITY \(2\)](#)
- [TRANS\\_RANK \(3\)](#)
- [WEAPON\\_TYPE \(3\)](#)

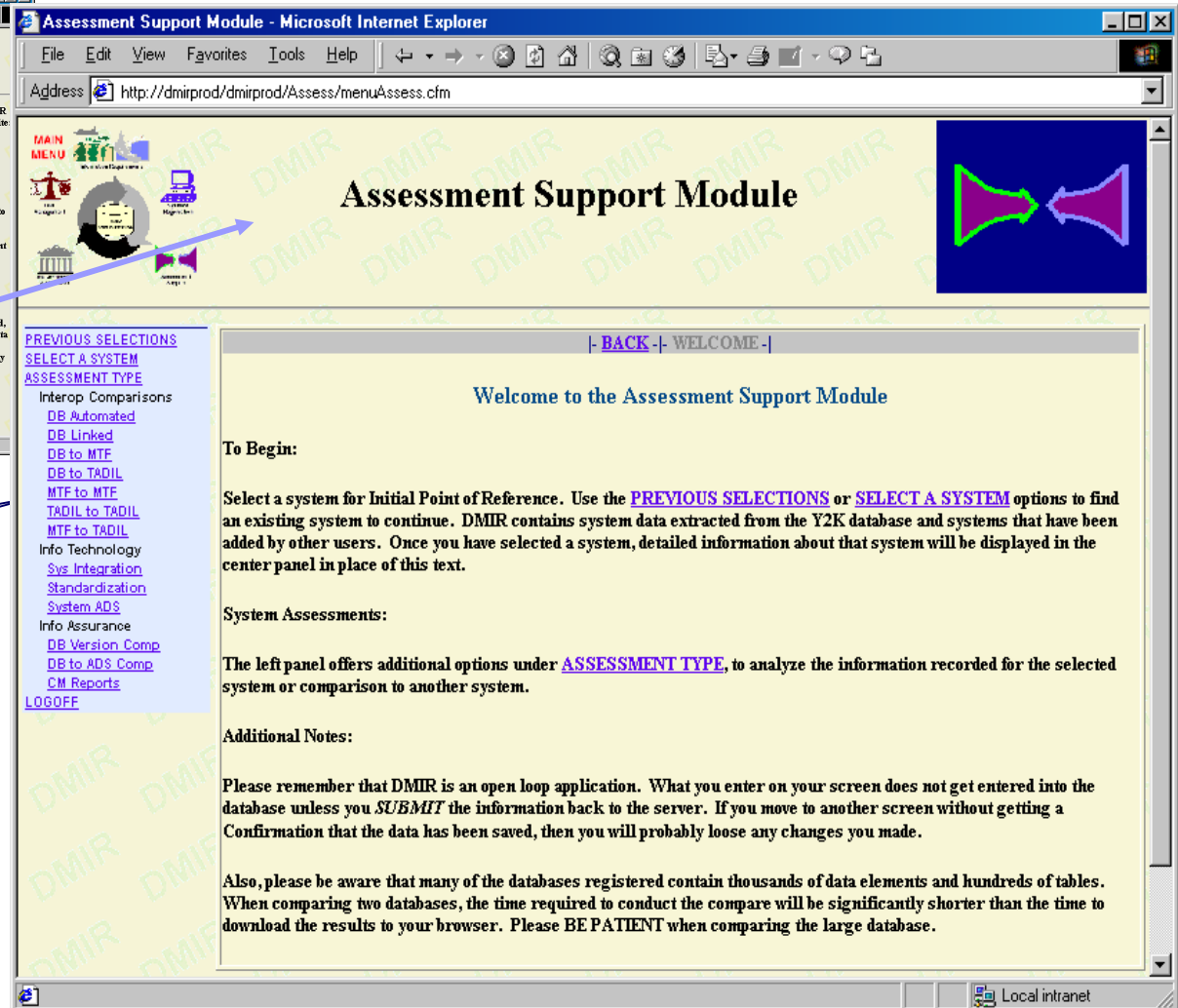




# DMIR Assessment Support



Assessment Types





# Related Efforts

- DON Integrated Architecture Database (DIAD)
  - Information Exchange Requirements
- NMCI Applications Enterprise Action Group
  - Database consolidation
- Task Force Web
  - XML-centric architecture
- Portal Integration Office
  - Authoritative Data Sources
  - Metadata Registry



# Summary

- The DON cannot afford, **from both cost and operational perspectives**, to ignore the need for more effective management of our data assets.
- Navy and Marine Corps strategic initiatives require an enterprise data management strategy to succeed.
- The Navy Logistics Community is a major functional area – we need to address your requirements!



# Points of Contact

Brian G. Wilczynski

Program Manager, Architecture & Interoperability Team

wilczynski.brian@hq.navy.mil

703-607-5653

Michael Jacobs

DMI Project Leader, Architecture & Interoperability Team

jacobs.michael@hq.navy.mil

703-601-3594

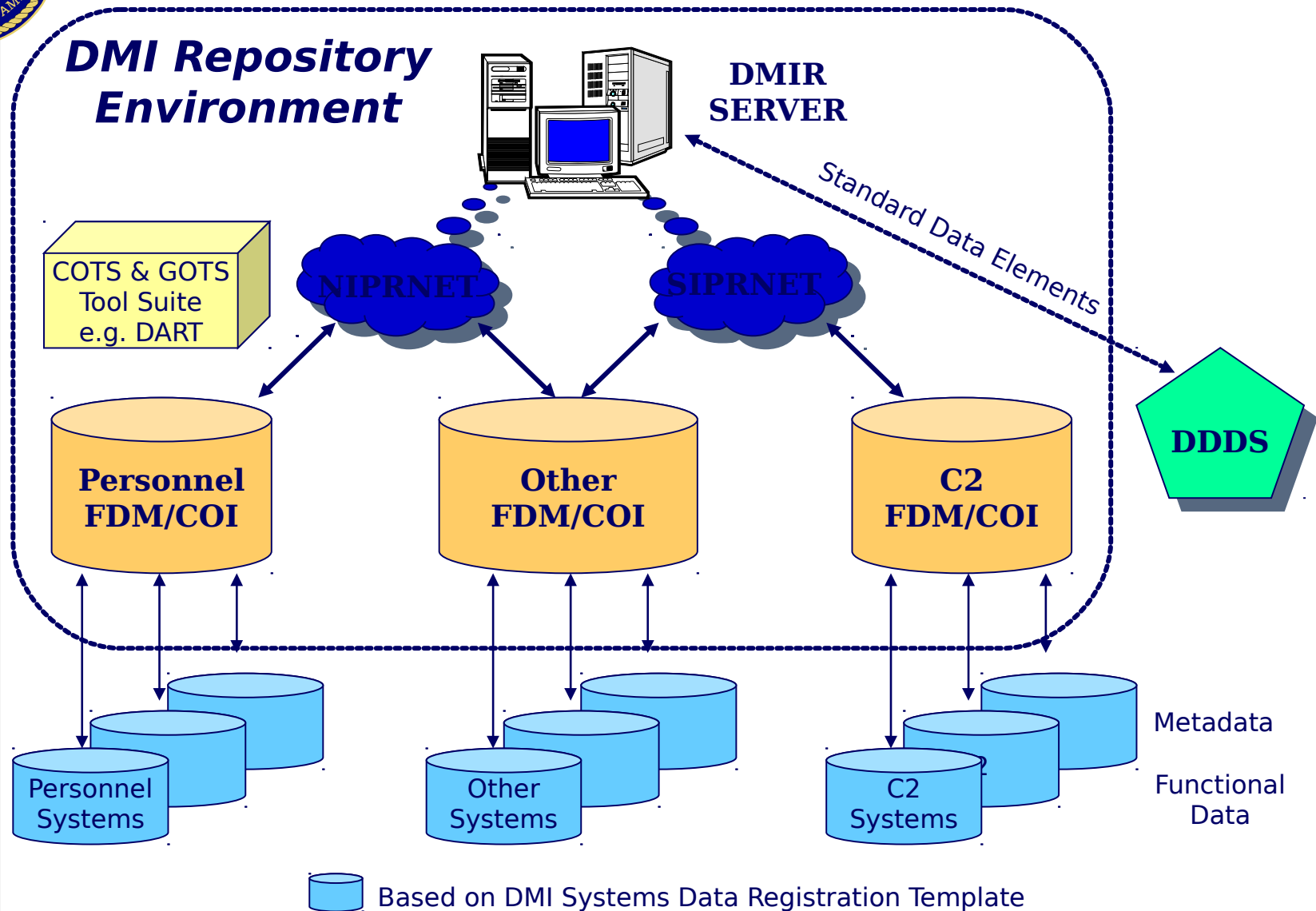
[www.don-imit.navy.mil](http://www.don-imit.navy.mil)



# Backup Slides



# DMIR CONOPS





# DMIR Architecture

